

U.S. Patent Application Serial No. 10/784,876
Amendment filed March 29, 2007
Reply to OA dated October 31, 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Amend the claims as follows:

Claims 1-28 (Canceled).

Claim 29 (Currently Amended): An image reader for optically reading an image on a medium by means of manual operations comprising:

a housing having an image reading surface coming in contact with the medium when reading an image;

a displacement detecting unit having a plurality of rollers for detecting a displacement of said housing; and

an image reading unit provided on said housing for reading image information of the medium according to a result of detection by said displacement detecting unit,

wherein said image reading unit automatically starts and terminates reading said image information based on said detected displacement of said housing provided by said displacement detecting unit using said plurality of rollers.

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Claim 30 (Currently Amended): An image reader according to claim 29;
wherein said displacement detecting unit comprises ~~a roller rotatably provided on the image reading surface of said housing, and~~ a displacement computing section for computing a displacement of said housing from the rotation of said plurality of rollers ~~roller~~.

Claim 31 (Original): An image reader according to claim 30 comprising:
first and second auxiliary rollers rotatably provided on the image reading surface of said housing so that said first and second auxiliary rollers hold said roller therebetween.

Claim 32 (Original): An image reader according to claim 30 comprising:
a read control unit for recognizing start and end of image read according to a result of detection by the displacement detecting unit and controlling said image reading unit according to a result of recognition.

Claim 33 (Original): An image reader according to claim 32 comprising:
an interface unit with various types of auxiliary image reader each having a different reading size connectable thereto;
wherein said read control unit processes a result of reading by said auxiliary image reader when said auxiliary image reader is connected to said interface unit.

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Claim 34 (Original): An image reader according to claim 32 comprising:

a power supply unit for intermittently supplying power to said displacement detecting unit

when an image is not being read according to a result of recognition by said read control unit.

Claim 35 (Original): An image reader according to claim 29 comprising:

a memory for storing the data corresponding to a plurality of images read by said image
reading unit as image data.

Claim 36 (Original): An image reader according to claim 32 comprising:

a communicating unit working as a communication interface between said memory and an
external device with said external device capable of accessing said memory connectable thereto.

Claim 37 (Original): An image reader according to claim 31 comprising:

a transmitting unit with an external device connectable thereto for transmitting a result of
reading by said image reading unit as image data to said external device.

Claim 38 (Original): An image reader according to claim 29 comprising:

a display unit provided on an operating surface of said housing for displaying an image
according to a result of reading by said image reading unit.

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Claim 39 (Original): An image reader according to claim 38;
wherein said display unit is provided in a vertical posture with respect to a reading surface
of said image reading unit.

Claim 40 (Original): An image reader according to claim 38 comprising:
an angle adjusting unit for freely adjusting an angle of a display surface of said display unit.

Claim 41 (Original): An image reader according to claim 38 comprising:
a protection cover for covering said display unit.

Claim 42 (Original): An image reader according claim 38 comprising:
an operating section provided near one edge of the operating surface of said housing and used
for an inputting operation.

Claim 43 (Original): An image reader according to claim 38 comprising:
a instructing unit for indicating a direction when an image is to be displayed on the display
of said display unit; and
a display control unit for controlling the displaying direction of the image on said display unit
according to contents of an instruction from said instructing unit.

Claim 44 (Original): An image reader according to claim 38 comprising:

a display control unit for dividing an image displayed by said display unit with a ratio of N:M (N+M=1) and displaying each of the divided images with a different contraction ratio or enlargement ratio.

Claim 45 (Original): An image reader according to claim 38 comprising:

a display control unit for displaying a whole or a portion of an image with the same, contracted or enlarged size as compared to the size of the original image displayed by said display unit by overlapping on the other image(s).

Claim 46 (Original): An image reader according to claim 38 comprising:

a display control unit for displaying in an array of a plurality of entire images or a portion of the image with the same, contracted or enlarged size as compared to the original size of the image displayed by said display unit.

Claim 47 (Original): An image reader according to claim 38 comprising:

a display control unit for displaying an arbitrary area of a document image with an enlarged or a contracted size as compared to the original size of the image displayed by said display unit.

Claim 48 (Original): An image reader according to claim 38 comprising:

a display control unit for displaying in an array of images displayed by said display unit which images are rotated or inverted in a plurality of directions;

a selecting unit for selecting any one image from the displayed rotated or inverted images;
and

a right posture correcting unit for converting the orientation of the read image according to the orientation of the image selected by said selecting unit.

Claim 49 (Original): An image reader according to claim 38 comprising:

a text portion determining unit for determining a text portion of the image;

a rotation direction detecting unit for detecting a direction of rotation of an image from a character image for the text portion determined by said text portion determining unit; and

a display control unit for displaying the image as a properly oriented image on the display of said display unit according to a result of detection by said rotation direction detecting unit.

Claim 50 (Original): An image reader according to claim 38 comprising:

a classifying unit for classifying a plurality of images read by said image reading unit according to prespecified items for classification;

a selecting unit for selecting any of the items for classification; and

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a display control unit for displaying the images corresponding to the item for classification selected by said selecting unit.

Claim 51 (Original): An image reader according to claim 29 comprising:
a digitizing unit for digitizing a result of reading by generating a threshold value for digitizing according to a result of reading by said image reading unit.

Claim 52 (Original): An image reader according to claim 29;
wherein, when reading an image, an action point of grasping fingers is at a position lower than a center of gravity of said image reader and at the same time a height of the action point is smaller than a width of said housing.

Claims 53-105 (Canceled).